

Application Serial No. 10/540,892
Reply to office action of November 26, 2008

PATENT
Docket: CU-4288

REMARKS/ARGUMENTS

Reconsideration is respectfully requested.

Claims 1-2 and 5-6 are pending before this amendment. By the present amendment, claims 1, 2, 5, and 6 are amended. No new matter has been added. These claims have been merely amended to more particularly point out and distinctly claim the subject matter of the present invention without adding any new matter.

In the office action (page 2), claims 5-6 stand rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. The applicants respectfully disagree and submit that claim 5 the present invention provides an efficient digital broadcasting service by transmitting data through a plurality of frequency bands by overcoming the maximum data transfer rate of each of the respective frequency band that is limited in the conventional digital broadcasting system because a broadcasting station has a certain frequency band to transmit different services. The present invention transmits contents collected by a camera for a standard definition television (SDTV), wherein the collected data are divided and transferred through the transmitters (i.e.; of each a plurality of broadcasting sites having at least one antenna with at least two frequency bands) to the receiving apparatus that is not currently able to be done by conventional digital broadcasting systems. Further, the receiving apparatus is able to receive the data and then reconstruct the data sent from a plurality of broadcasting sites. That is, limited frequency bandwidth of a conventional digital broadcasting service is efficiently allocated to meet the increased data transfer capacity (specification at page 2, lines 4-7 and page 6, line 19 to page 8, line 6). Accordingly, the applicants respectfully submit

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that claim 5 complies with 35 U.S.C. §101; and therefore, the applicants respectfully request withdrawal of the 101 rejection.

In the office action (page 2), claims 1-2 and 5-6 stand rejected under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 6,470,004 (Murata) in view of U.S. Patent No. 7,085,377 (Norr).

The Applicants have amended claim 1 to clarify the presently claimed invention and to traverse the Examiner's rejection.

The present invention relates to an apparatus in a digital broadcasting system for dividing data in order to transmit data through a plurality of channels from multiple broadcasting sites and transmitting data having header information so as to reconstruct the data in a receiving apparatus (specification at page 2, lines 11-15). Further, the invention discloses broadcasting system for transmitting in digital broadcast service, wherein each broadcasting site transmits from an antenna having at least two frequency bands. These frequency bands must meet the standards for the digital broadcasting system (specification page 1 line 22 to page 2, line 7). Accordingly, the present invention discloses transmitting data through a plurality of frequency bands from a plurality of broadcasting sites (i.e.; a plurality of antennas for transmitting channel encoded data) if the available data capacity of at least one frequency band of the broadcasting sites can not accommodate the necessary data capacity for that respective frequency band (specification page 6, lines 4-18). In contrast, Murata relates to a **communication system** that is totally different from the disclosed broadcasting system of the present invention.

Claim 1 has been amended to better clarify this aspect of the presently claimed

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invention, and now recites, inter alia:

--a capacity managing **means unit** for dividing the source-coded data into divided data for a plurality of channels ~~in case that an available data capacity for transmitting the source-coded data does not exist in one channel but sum of available data capacities of several channels can accommodate the source-coded data~~, and **adding generating** header information **corresponding** to the divided data--.

Nowhere in Murata nor Norr, neither alone or in combination, teaches, suggest, or mentions this limitation of presently amended claim 1 of the present invention.

In contrast, Murata discloses transmitting as a downlink communication (i.e.; not a broadcasting signal based on the requirements for frequency bands allocated to the digital broadcasting system. (Murata Abstract). This **communication system** of Murata is totally different from the disclosed **broadcasting system** of the present invention. That is, Murata merely discloses a channel management which is necessary for multilateral communication environments such as a mobile communication, but Murata does not teach, disclose or even suggest allocating predetermined data, e.g., packet data or a program, to a plurality of channels and generating header information to record information relating to the allocating in the broadcasting system as disclosed by presently amended claim 1 of the present invention.

Furthermore, Norr merely discloses a multi-stream broadcasting system for transmitting a plurality of streams having different rights to access from each other. However, nowhere in Norr teaches, discloses or even suggests allocating predetermined data, e.g., packet data or a program, to a plurality of channels and generating header information to record information relating to the allocating in the broadcasting system as disclosed by presently amended claim 1 of the present invention.

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In contradistinction, the present invention transmits contents collected by a camera for a standard definition television (SDTV) in a digital broadcasting system. The collected source-coded data are divided into divided data for a plurality of channels that generates and adds header information corresponding to this divided data and records this header information of the divided data for allocating of the divided data in the plurality of channels in the digital broadcasting system for transferring this divided data through the transmitters to the receiving apparatus. Then, the receiving apparatus in the digital broadcasting system receives the divided data and reconstructs the received divided data based on the recorded generated header information of the received divided data. That is, limited frequency bandwidth of digital broadcasting service is efficiently allocated in order to meet the increased data transfer capacity rate requirements (specification at page 6, line 19 to page 8, line 6).

As a result, the present invention provides an efficient digital **broadcasting service** by transmitting data through a plurality of frequency bands from multiple broadcasting sites that overcomes limitations of the maximum data transfer rate in the conventional digital broadcasting system because a broadcasting station has a certain frequency band to transmit different services based on the digital broadcasting standards (specification at page 9, lines 18-23). Accordingly, nowhere in Murata and/or Norr, alone or in combination, teaches, discloses or even suggests presently amended claim 1 of the present invention above.

Therefore, the applicants respectfully submit that nowhere in Murata and/or Norr, alone or in combination, are the limitations relating to the **broadcasting system** of presently amended claim 1 taught or suggested, that recites inter alia, —a capacity

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managing unit for dividing the source-coded data into divided data for a plurality of channels, and generating header information corresponding to the divided data--,
because Murata **only relates to a communication system** that merely discloses channel management for multilateral communication in mobile communication and Norr merely discloses a **multi-stream broadcasting system for transmitting a plurality of streams having different rights to access** from each other that is **unrelated** to transmitting data in a digital broadcasting of the present invention.

In regards to claim 2, the applicants respectfully submit that claim 2 is allowable at least since it depends from claim 1, which is now considered to be in condition for allowance for the reasons above.

As to independent claim 5, independent claim 5 recites similar features to those found in claim 1. Therefore, for reasons analogous to those argued above with respect to claim 1, claim 5 is patentable over the applied references.

In regards to claim 6, the applicants respectfully submit that claim 6 is allowable at least since it depends from claim 5, which is now considered to be in condition for allowance for the reasons above.

For the reasons set forth above, the applicants respectfully submit that claims 1-2 and 5-6, now pending in this application, are in condition for allowance over the cited references. Accordingly, the applicants respectfully request reconsideration and withdrawal of the outstanding rejections and earnestly solicit an indication of allowable subject matter.

When all pending elected claims are found to be allowable, the examiner is authorized to cancel all withdrawn claims, if any, via an examiner's amendment and

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issue a Notice of Allowance. The applicants reserve the right to present the cancelled withdrawn claims in a divisional application.

This amendment is considered to be responsive to all points raised in the office action. Should the examiner have any remaining questions or concerns, the examiner is encouraged to contact the undersigned attorney by telephone to expeditiously resolve such concerns.

Respectfully submitted,

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